

AMENDMENT TO THE SPECIFICATION

Please amend the following paragraphs in the specification wherin double brackets and strikethrough indicate a deletion and underline indicates an addition, as follows.

[0019] FIG. 1 shows a view from above of the metering unit 1 according to the invention for metering bulk material. The essential components are a container 3 for bulk material, a metering module 2 and a stirring apparatus 5. The metering module 2 contains two screws 4; these are visible through a feed opening in the bottom of the container 3. The screws 4 are exchangeable and can be replaced by other screws. However, the metering module 2 can also have a single screw 4 or another metering means such as a conveyor belt, for example. The metering means are driven by means of a wheel 6. A gear 7 is additionally provided here between the screws 4 and the wheel 6 as shown in FIG. 1. However, the gear 7 can be omitted especially if only one metering means is provided in the metering module 2, for example, a single screw 4. In this simple case, the drive axis designated by the letter C can at the same time be the axis of rotation of the screw 4. The metering means of the metering module 2 convey the bulk material to an outlet 8.

[0021] The metering unit 1, as is also shown in FIG. 7, is designed as an exchangeable unit and is primarily used in metering units, loss-in-weight feeders, extruders or tabletting machines. For this purpose, the B axis by which means the stirring apparatus is driven, has an axial quick coupling unit 10 at one end, as shown in FIG. 2. When the axial quick coupling unit 10 is coupled on, the metering unit 1 can be swivelled swiveled about the B axis, as is illustrated in FIGS. 8a, b. A machine equipped with metering units 1 is extremely suitable for producing mixtures of bulk material, for example, in a laboratory. A plurality of metering units 1 each contain a bulk material and are used in order in the machine. These machines can be fitted with a drive unit 24, for example, which is described further below and which advantageously cooperates with the metering unit 1. FIG. 3 shows a view of a base rotor 11 obliquely from below. The central area of the base rotor 11 is formed by a cap 16. Running centrally through the cap 16 along the B axis is a hole 19 into which a shaft 15 fits, for example, and the base rotor 11 can be affixed thereon. In the lower visible portion the hole 19 is expanded so that when the shaft is inserted, an intermediate space is formed in this lower portion between the cap 16 and the shaft

15. When the base rotor 11 is attached for operation as shown in FIG. 1, and turns, bulk material can creep into this intermediate space, especially because of the short distance from the base area of the container 3. When the base rotor 11 turns in the directions of the arrows indicated in FIGS. 1 and 3, the bulk material flows through a groove 17 provided in the lower portion of the cap 16 from the intermediate space back into the container 3. The groove 17 is arranged so that its inner end runs before the outer end in the direction of rotation of the base rotor 11 so that a direction of flow from inside to outside is predefined. The continuous flow of bulk material out from the intermediate space avoids bulk material becoming deposited on the shaft, sticking or adhering there and being able to block or damage the base rotor 11 with time.

[0022] FIG. 4 shows a lateral rotor 12 comprising two blades 18 for example. The lateral rotor can be detachably attached, for example, using a screw through a hole 20 to the cap 16 of the base rotor 11. The blades 18 are each bent outwardly upwards or downwards with respect to a vertical axis of rotation and chamfered at the front in the direction of rotation. The chamfered portions of the blades 18 are in turn substantially matched to the contour of wall areas of the container 3 or an additional container which can be placed thereon and rotate at a distance of less than 1 mm from the relevant wall area. Adhering bulk material can thereby be removed from this wall zone, for example, so that a small residual quantity can be ensured even with adhesive bulk material.

[0024] The combination of the base rotor 11 with one or more lateral rotors and/or bridge breakers 13 allows the construction of various stirring apparatus suitable or optimised optimized for specific bulk material. For example, lateral rotors 12 and bridge breakers 13 can be attached in alternating sequence on a base rotor 11. Other sequences are naturally also possible according to the invention.

[0025] Naturally, other forms of blades 18 and bridge breaker rods 14 than those in the exemplary embodiments as shown in FIGS. 4 and 5 are also possible according to the invention. For example, the blades 18 can both be bent upwards or downwards, and also matched to a curved or sloping wall area of a container 3 or an additional funnel. Also the bridge breaker rods 14 can be bent, for example, they can have transverse rods forming a rake or they can have any

cross-section.

[0026] In another embodiment which is not shown, the blades 18 of the lateral rotor 12 can be configured so that they can be attached to the bridge breaker 13 like the bridge breaker rods 14. Consequently, a bridge breaker 13 thus configured then takes over the function of the lateral rotor 12 at least in part.

[0033] 2. Container Metering module

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[0068] E. Axis